Hybrid warfare

Implications for CAF force development

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Abstract

The subject of "hybrid threats," "hybrid warfare," and "hybrid adversaries" has generated considerable debate within Western militaries, academia, and the professional military literature over recent years. The debate has mostly centred on fundamental issues such as the validity of the hybrid concept, the historical uniqueness of hybrid actors or methods, and what force structure modifications, if any, should be undertaken by Western militaries to best prepare to address the challenges posed by such potential adversaries. For CAF Joint Force Development, the topic is significant enough to have warranted a distinct scenario in the 2014 Force Development Scenario Set. Using historical analysis, this paper identifies and discusses the strategic, operational, and tactical level characteristics of those organizations that have fielded 'hybrid' capabilities in the past. The paper then draws out implications to be considered by those involved in CAF force development activities.

Significance to defence and security

The topic covered in this paper has a high profile in the professional military literature but is also contentious, with no broad agreement across the various commentators. This paper provides clarity on the fundamental characteristics of organizations exhibiting hybrid characteristics and some of the typical elements of conflicts in which hybrid methods are employed. This will help those involved in force development in the Canadian Armed Forces to better consider what capabilities might be required to successfully adapt when such conditions are encountered on future operations.

Résumé

Les termes «menaces hybrides,» «guerre hybride» et «adversaires hybrides» ont été les sujets de nombreux débats au sein des forces armées occidentales, dans les milieux académiques ainsi que dans la littérature militaire des dernières années. Le débat a surtout porté sur des éléments fondamentaux tels que la validité du concept hybride, l'originalité des méthodes ou acteurs hybrides dans un contexte historique et les ajustements de structure devant être entamés par les forces armées occidentales afin de mieux se préparer pour d'éventuels affrontements contre de tels adversaires potentiels. Jugé important dans le contexte du développement des forces interarmées des Forces armées canadiennes (FAC), un des dix scénarios de l'Ensemble des scénarios de développement de la force 2014 a été spécifiquement dédié à ce sujet. Ce document identifie et examine les caractéristiques stratégiques, opérationnelles et tactiques des organisations qui ont antérieurement déployés des capacités «hybrides.» Finalement, le document identifie certaines répercussions qui devraient être considérées par les responsables du développement des forces des FAC.

Importance pour la défense et la sécurité

Le sujet du présent document figure pro éminemment dans la littérature professionnelle militaire, mais il en est un litigieux, ne faisant pas l'unanimité auprès des divers intervenants. Ce document démystifie les caractéristiques fondamentales des organisations exhibant des traits hybrides ainsi que certains éléments se rattachant spécifiquement à des conflits, à l'intérieur desquels, des méthodes hybrides ont été préconisées. En se faisant, il facilitera la compréhension de ces aspects par les individus impliqués dans le processus de développement de la force des forces armées canadiennes et les incitera à mieux identifier les capacités qui sont requises lors d'éventuelles opérations militaires comportant ces éléments.

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Acknowledgements

1 Introduction

The subject of "hybrid threats," "hybrid warfare," and "hybrid adversaries" has generated considerable debate within Western militaries, academia, and the professional military literature over recent years. The debate has mostly centred on fundamental issues such as the validity of the hybrid concept, the historical uniqueness of hybrid actors or methods, and what force structure modifications, if any, should be undertaken by Western militaries to best prepare to address the challenges posed by such potential adversaries. Unsurprisingly, there has been little consensus, either in the related literature or in contemporary Department of National Defence / Canadian Armed Forces (DND / CAF) Force Development (FD) material.[1] The bulk of the literature on the subject does not originate in Canada and is not written with a Canadian perspective. This is significant because the FD implications of the topic will be different for each country. For example, the United States plays a much larger role in assuring global security than does Canada. It stands to reason that the likelihood of being involved in certain types of campaigns, and the frequency of involvement, and the FD implications will be different for the US military and the CAF.

Despite this, the new CAF joint level Force Development Scenario Set (FDSS) includes a "hybrid warfare" scenario. This is a direct result of the conclusions reached at the end of the 2012 Capability Based Planning (CBP) cycle.[2] Other than a short concept paper produced by the staff of the Directorate of Capability Integration in May 2012, little Canadian-specific research and analysis on the topic has been conducted. The primary question addressed by this paper is: what are the typical historic characteristics of hybrid actors and what are the implications for the CAF and FD activities?

The argument of this paper is that the proponents of hybrid warfare (meaning, those typically recommending wholesale force structure modifications) have for the most part misconstrued the historical existence of "hybrid" actors or characteristics in warfare and have not addressed fundamental military strategic and operational-level issues to better understand more than the difficult tactical-level problems created by those adversaries categorized as hybrid. Consequently, the limits of the capabilities of hybrid actors have been consistently overstated and the strengths and weaknesses of conventional military forces have been consistently misrepresented.

This paper will not provide a full review of the intellectual origins of the hybrid debate or a detailed discussion of the major points of the debate. Similarly, there will only be a very brief discussion of the manner in which the relevant DND/CAF FD material addresses hybrid warfare. Both of these limitations have been established in an effort to limit the overall size of this paper.

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[1] For a discussion on the lack of consensus see the literature review in Timothy McCulloh and Richard Johnson, *Hybrid Warfare*, Joint Special Operations University Report 13-4, August 2013, pp.5-14. Available at: https://jsou.socom.mil/JSOU%20Publications/JSOU%20134_McCulloh,Johnson_Hybrid%20Warfare_final.pdf accessed 8 August 2013. The authors extend appreciation to one of the peer reviewers for pointing us to this paper.

[2] At the conclusion of the 2012 CBP cycle a requirement for a 'hybrid warfare' type scenario was required to ensure that the next iteration of CBP tested CAF capabilities against a full contemporary representation of the spectrum of conflict.

Those wishing greater insight are recommended to review the source material referenced in this paper.

Significantly, this paper will not offer firm definitions of either hybrid threats, hybrid warfare, or any associated terms. This is primarily due to the fact that, as will be shown below, there is no consistent usage of either hybrid threats or warfare in the literature pointing to the immaturity of the discussion.[3] Furthermore, it is not the intent of this paper to delve into the tautological and, at times teleological debates on definitions and descriptions of the topic.[4] This is, in the end, less valuable for CAF FD purposes than focusing on the common characteristics typically described in the literature on the subject.

In addition, and at risk of creating an intellectual weakness in the paper, the authors have adopted relatively simple descriptions to facilitate the analysis. These descriptions will no doubt prove inadequate for some readers. The term 'hybrid warfare' describes a conflict in which at least one belligerent employs organized military, paramilitary, and non-state (irregular) forces simultaneously, coordinating multiple forms of warfare as one means in a more-or-less comprehensive strategy meant to achieve a political end. On combatants, this paper adopts Colin Gray's division of irregular from regular based on rough lines of formal legal authority. Regular (or conventional) forces are those that are legally constituted by a state, including the Special Operations Forces (SOF) elements of state armed forces. Irregular forces are those that are not constituted by a state.[5] This leaves many grey areas. For example, what of a group such as Hezbollah that plays a formal role in governance but whom also possess paramilitary forces outside of the control of the internationally recognized government of the state? Moreover, this definition does not necessarily imply that an irregular force is an *illegal* force. For example, if a state government is deemed to be criminal or otherwise illegitimate there is much room for interpretation of an armed opposition to that regime being at least in adherence to the spirit of international law.

Finally, these basic definitions, however flawed, serve an additional purpose. Any investigation into the relevant literature reveals that there is very little substantive material on "hybrid warfare" per se. Much of the literature that is topically related to 'hybrid warfare' will not employ the term; the fact that so much covered in the concept has been seen in the past means that the massive literature on insurgency, counterinsurgency, asymmetric threats, irregular warfare, etc., has some bearing on the hybrid warfare discussion.[6] Not surprisingly, many of the same historical examples are employed in support of major themes and concepts by authors of the literature.

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[3] McCulloh and Johnson also note this problem.
[4] For insight to the varied related definitions see the US Government Accounting Office, *Hybrid Warfare*: Briefing to the Subcommittee on Terrorism, Unconventional Threats and Capabilities, Committee on Armed Services, House of Representatives, 10 September 2010. Available at: https://jsou.socom.mil/JSOU%20Publications/JSOU%2013-4_McCulloh,Johnson_Hybrid%20Warfare_final.pdf Accessed December 2013.
[5] See Colin Gray, *Another Bloody Century*. London: Phoenix, 2006, p.215.
[6] For example, much relevant material can be found in classic works such as Robert Asprey's *War in the Shadows: The Guerrilla in History*, (NY: Morrow, 1975) or Mao Tse-Tung's *On Guerrilla Warfare* (S.B. Griffith (trans.), University Press of Illinois, 1961 (2000)) and more recent work such as Rod Thornton's *Asymmetric Warfare* (Malden MA: 2007), Walter Dorn's article "The UN's First "Air Force": Peacekeepers in Combat: Congo 1960-64 (*Journal of Military History*, Vol.77, October 2013, pp.1399-

2 Background to hybrid warfare

The origins of the hybrid discussion can be traced back through many of the concepts that were spawned in the period after the end of the Cold War and the 1991 Gulf War.[7] For example, in recent years the terms Compound War, 'Hybrid,' 4th Generation war, 5th Generation war, '3-Block War,' Traditional Warfare,' and others have been used to describe everything from the strategic to the tactical level military environment, often in such a manner that confuses threat, adversary, and the levels of warfare. The problem for force developers is sorting through the various concepts to properly understand which of these, if any, are worthy justifications for large scale changes to future force structures, which are tactical level discussions masquerading as strategic level concepts, and lastly placing these ideas into legitimate historical context. The risk for force development is that important discussions of operating environment characteristics become masked in a flurry of adjectives and buzzwords purporting to illustrate supposedly new issues.[8] This is not an insignificant problem and authors on all sides of the hybrid discussion, including Frank Hoffman, Colin Gray, Peter Mansoor, Williamson Murray, Russell Glenn, and the authors of the Winograd Commission Report have commented on the lack of intellectual rigour, poor historical grounding, and negative effects characteristic of much of the conceptual thinking on contemporary and future warfare.[9]

The frequency with which non-state actors are being encountered in the battlespace and the increasing availability of weapons and technology has led to the argument that the convergence of these trends represents a new phenomenon best described as "hybrid threats" and those situations involving such "threats" can be described as "hybrid warfare."[10] Like all conceptual thinking, that of hybrid warfare has generated a considerable amount of debate. For example, Frank Hoffman, widely credited as the main instigator of the hybrid discussion, believes that hybrid warfare is an

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1425), and James Corum and Wray Johnson's *Airpower in Small Wars: Fighting Insurgents and Terrorists* (Lawrence KS: 2003).

[7] See for example Martin van Crevald's *The Transformation of War*, (NY: Free Press, 1991). Much of the language in this volume is similar to that seen in material discussing asymmetry or asymmetric, counterinsurgency, 3-block war, generational war, and the language of the hybrid discussion. Many often use the same or related historical examples such as: the destruction of three Roman Legions by Arminius in AD 9, the Peninsular War of 1807-1814 during the Napoleonic Wars and the wars fought in Vietnam by France and the United States. The material all differs but is closely related.

[8] Gray (2006), p.218.

[9] See Francis G. Hoffman, "Future Hybrid Threats: An Update," Perspectives on the Future Security Environment, Statement to the Subcommittee on Intelligence and Emerging Threats and Capabilities, U.S. House of Representatives Armed Services Committee, 13 February 2012, p. 15; Colin Gray described Effects Based Operations (EBO) as the height of hubris by claiming that the "conduct of war can be precisely orchestrated, with the effects of particular military behaviours reliably predictable." Gray (2006), p. 226-227; Peter R. Mansoor, "Introduction," in Williamson Murray and Peter R. Mansoor, eds., *Hybrid Warfare – Fighting Complex Opponents from the Ancient World to the Present*, Cambridge University Press, 2012, p. 1. The relevant points from the Winograd Commission report are discussed in detail below.

[10] Frank G. Hoffman, "Hybrid Threats: Reconceptualizing the Evolving Character of Modern Conflict," *Strategic Forum*, National Defence University, April 2009, p.5.

emergent type or warfare that is becoming predominant.[11] Such proponents tend to point to the 2006 Second Lebanon War as a primary example. Others dismiss hybrid threats and hybrid warfare as buzzwords representing little that is new.[12] For example, Colin Gray has argued "the historical record shows incontestably that nearly all wars have been more or less 'hybrid.'"[13] Gray's point is supported by many others[14] Hoffman counters this by arguing that authors such as Gray describe an earlier concept, that of "compound wars." Compound wars are described as "major wars that had significant regular and irregular components fighting simultaneously under unified direction."[15] Hoffman argues that compound wars do not fully capture "the complexity, fusion, and simultaneity we anticipate at the operational and even tactical levels in wars where one or both sides is blending and fusing the full range of methods and modes of conflict in the battlespace."[16] Nonetheless, Hoffman argues that "hybrid wars are not new," and, in addition to the Lebanon example, offers the wars in Chechnya in the 1990s, the Boer War, and the Iraqi Fedayeen circa 2003 as relevant historical examples.

While there is some agreement on the most broad, typical features of the discussion, there is significant divergence on the focus, and by extension, the details, of those features. For example, some contributors are content to focus exclusively on the tactical and operational level dynamics of hybrid warfare. These focus on such things as the access to sophisticated weapons systems, paramilitary training, semi-sophisticated command and control, tactical flexibility and adaptability, sophisticated propaganda, and adeptness at the use of fire and manoeuvre, at least defensively, so as to prolong conflict to bring about stalemate, if not outright victory. There is often discussion on some form of state sponsorship as a key characteristic, and suitable terrain. It is these commentators who most frequently cite the Iraq and Second Lebanon War. At the operational and tactical level the most insightful material is that which falls into the category of 'lessons learned' or 'lessons identified.'[17] Much rarer are those authors who try to tackle the

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[11] Hoffman, Frank G, "Hybrid Warfare and Challenges," *Joint Forces Quarterly*, Issue 52, 1st quarter, 2009, p. 34. "Tomorrow's enemies will remain as cunning and elusive as today's foes. They may be more lethal and more implacable. We should plan accordingly."

[12] Glenn, Russell W., "Thoughts on 'Hybrid' Conflict," *Small Wars Journal*, [www.smallwarsjournal.com].

[13] Colin S. Gray, *Schools For Strategy: Teaching Strategy For 21st Century Conflict*, Strategic Studies Institute, November 2009, p. 22.

[14] See for example, Mansoor "Introduction" in Murray and Mansoor, p.1.

[15] Hoffman, (JFQ 2009), p.36.

[16] Ibid.

[17] The Israeli "Winograd Commission" stands as an exemplar of how to conduct a frank, forthright, cross-cutting national assessment of a military campaign. See *The Commission for the Examination of the Events of the 2006 Campaign in Lebanon* (The Winograd Commission), Final Report, January 2008 (English translation in possession of the authors). Beyond official internal lessons learned reports from various militaries much useful information is contained in, for example, the many and topically varied reports written on contemporary operations in the post-9/11 period for the US Joint Forces Command. Many of the better reports were produced by RAND Corporation authors and other private contractors. For example, Russell Glenn, *All Glory is Fleeting: Insights from the Second Lebanon War* (RAND, 2012); Russell Glenn and S. Jamie Gayton*, Intelligence Operations and Metrics in Iraq and Afghanistan: Fourth in a Series of Joint Urban Operations and Counterinsurgency Studies* (FOUO) (RAND: 2008). Much useful analysis has also been produced by internal and external think-tanks. See, for example, Stephen Biddle and Jeffrey Friedman, *The 2006 Lebanon Campaign and the Future of Warfare: Implications for Army and Defence Policy* (Carlisle: US Army War College, 2008); LCol Scott Farquhar, ed., *Back to Basics: A Study of the Second Lebanon War and Operation CAST LEAD* (US Army Combined Arms Center, 2009); Anthony Cordesman, *The Gaza War: A Strategic Analysis* (Center for Strategic and International Studies, 2009).

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subject of hybrid warfare in a manner that illustrates the difficult strategic issues that are as important to force development discussions as tactical or operational level issues. This group tends towards a more historical approach in an effort to discern what might actually be considered 'new', what characteristics have deep historical roots and should therefore be unsurprising, and what might be suggested about future warfare based on what has happened across a deeper period of time.[18]

One of the more significant problems however, is the lack of consensus and discipline with the use of hybrid threat, hybrid warfare, or hybrid adversaries. This issue is important because if the problem at hand is a shift in the expected type of warfare, it is expected that the characteristics should point to something nearing uniqueness. If however, the discussion is more about the capabilities of particular actors then the discussion is less about an increase in a type of warfare and more about specific groups. Typically, a threat in a military context requires an actor with capability and intent. If the problem is characterised, as Hoffman has, as 'hybrid threats,' then the issue is more about specific groups and it can be plausibly argued that the issue is one of intelligence and understanding the adversary, not one of a shift in the character or nature of warfare. This is also important because ill-disciplined use of threat, adversary, warfare, allows for poor discussions of the topic. For example, can an insurgent group possess hybrid capabilities? Certainly, and hybrid actors can conduct other types of campaigns, such as Hezbollah's largely defensive 2006 actions against Israel. With this being the case it stands to reason that hybrid warfare is insufficiently unique to conceptually stand independently. This problem will become more apparent in the characteristic discussion below.

The dynamics of the hybrid warfare debate are reflected in contemporary DND/CAF FD literature, the primary documents are the RCAF's Projecting Power: Canada's Air Force 2035; the RCN's *Horizon 2050: A Strategic Maritime Concept for the Canadian Forces*; the Canadian Army's *Army of Tomorrow* series; and, the joint-level *Future Security Environment 2013-2040*. None of these documents employ 'hybrid' consistently or in such a manner that demonstrates at least acceptance of a common definition. Disagreement on the implications can be expected but a lack of consensus on the subject itself demonstrates the problem character of the broader debate.[19] One force development document (which, perhaps, should not be considered a core document) is, however, relevant to this discussion. At the conclusion of the 2012 CBP cycle, Directorate of Capability Integration staff produced a hybrid warfare concept and this paper, which will be discussed below, has formed a rough basis for the new FDSS hybrid warfare scenario.[20]

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[18] See, for example, Murray and Mansoor; Eliot Cohen, *Conquered Into Liberty*. NY: Free Press, 2011; Dan Cox, Thomas Bruscino, Alex Ryan, "Why Hybrid Warfare is Tactics Not Strategy: A Rejoinder to "Future Threats and Strategic Thinking,"" *Infinity Journal*, Vol.2, Iss.2, Spring 2012, pp.25-29. In some cases, such as with Cohen, the term hybrid war is not used but it is clear that the author is pointing out historical parallels with current military conceptual discussions.

[19] A full discussion of these documents, including references, is provided in Annex A.

[20] Chief of Force Development, Directorate of Capability Integration, *Hybrid Warfare Concept*, June 2012 (Hereafter CFD HWC). This document might not be considered 'core' due to the limited distribution. However, the document proved to be influential and part of the broader justification for inclusion of a hybrid warfare scenario in the 2014 CFD Force Development Scenario Set.

3   The characteristics of hybrid warfare

The previous section provided an overview of the origins of the hybrid warfare debate and the manner in which DND / CAF documents raise the issue. This section will dissemble the characteristics and features of the conceptual hybrid warfare environment to better understand the capability-specific implications of hybrid warfare. It will also raise some important questions that should be considered but which fall outside of the bounds of operational-level capability based planning processes. The discussion below is divided into strategic, operational, and tactical level considerations.

3.1   Strategic level

It has been argued that "the hybrid warfare concept really comes down to a focus on tactics and techniques which is not a useful construct to guide policy and strategy matters."[21] Additionally, it may be true, and the authors tend to accept, that notions of hybrid warfare may be insufficiently unique from other concepts such as Comprehensive Approach to form the primary justification for wholesale realignment of force structure as suggested by proponents such as Hoffman. "The issues brought forward by hybrid conflict," one authority has written, "are certainly relevant, but they would seem to be of lesser value in moving doctrine and security thinking forward" than suggested by proponents.[22] As will be shown in this section, the main strategic level issues that fall out of the literature related to hybrid warfare are equally applicable to all military operations. The issues come to light when three characteristics of hybrid wars are examined.

3.1.1   Long wars

The first characteristic is, similar to other 'small wars,' hybrid wars tend to be long wars. As James Corum and Wray Johnson wrote in 2003:

> The insurgency in Guatemala lasted for over thirty years. The current war in Columbia began in the 1960s. All of the African insurgencies lasted for more than a decade. Israel fought Hizbullah in southern Lebanon for eighteen years.[23]

This conclusion is confirmed by Robert Asprey's longer scan of history[24] and by more recent experiences in Iraq, Afghanistan, and the unresolved threat posed by Hezbollah to Israel. Depending on when one establishes the start date, the communist struggle in China, which clearly took on a hybrid character over the final 15 years or so, took 2 to 3 decades before ultimate resolution. Therefore, the CFD Hybrid Warfare Concept (HWC) paper is correct in arguing that

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[21] Cox, Bruscino, and Ryan, p.25.
[22] Glenn (2009), pdf version, p.6.
[23] Corum and Johnson, p.436. A similar point is made by Mansoor, in his Introduction to Murray and Mansoor, p.7.
[24] See fn 3.

such wars tend to be "protracted slow-burning conflicts of attrition."[25] The pertinent question is why does this tend to be the case?

The answer differs from conflict to conflict but in general it is because "irregular warfare in its nature is even more obviously a contest of political wills than is regular combat."[26] Broadly speaking, those belligerents that might be classified as 'hybrid' fight with ideological, religious, or other motivations that can be seen as fundamental to their conception of themselves.[27] There are exceptions, and perhaps the narcotic cartel component of Columbia's late-20th century experience is one of the better examples. Will power, or the willingness to expend lives, resources, and treasure, takes on a heightened meaning in hybrid wars. All war is a contest of will to some degree but the hybrid belligerent is often fighting because it views fundamental interests as being at stake.[28] Simply using Hoffman's examples we see that this was the case with the Boers, in Chechnya, and with Hezbollah. Therefore, those considering intervening in such a conflict should ensure that similar vital interests are also under threat.[29] The alternative is commitment to prolonged warfare that may have only vague linkages between political goals and military activities, always a recipe for an unwinnable situation where a clear military—or any—solution might not exist.[30]

In order to discern what the motivations of a potential opponent may be and to understand the probable character of a conflict one must "possess a realistic understanding of the "other.""[31] Such a realistic appraisal can only come about through understanding the culture, history, values, approach to warfare, and the putative goals of the adversary.[32] Only then can the framework under which they are operating be understood. For example, if one recent assessment of the ISAF campaign in Helmand province, Afghanistan, is correct, and the conflict in that area was hyper-

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[25] CFD HWC, p.1.

[26] Gray (2006), p.229.

[27] Then again, so do many non-state actors. It is here that one begins to see the difficulty of generically applying 'hybrid' to undefined discussions of threat or warfare outside of a particular context.

[28] McCulloh and Johnson's analysis supports this, both in their identified principles (pp.16-17) and in their argument that sound operational approaches to counter hybrid adversaries must consider disruption of the hybrid adversary's logic behind the forms of warfare being employed (p.102). Certainly van Crevald would likely take issue with this characterization of interest. See the arguments on pp.212-227 in his *Transformation of War*.

[29] Williamson Murray, "Conclusion" in Murray and Mansoor, p.293.

[30] Friedrich Korkisch, "Airpower's Role in Hybrid War Needs Clarification: the US View," in Josef Schrofl, Bahram Rajaee, Dieter Muhr, eds., *Hybrid and Cyber War as Consequences of the Asymmetry*, Frankfurt: Peter Lang, 2011, p.95. Interestingly, the CFD Hybrid Warfare Concept paper states that "no clear military solution" may exist for a hybrid warfare situation yet then states that it will "focus predominantly on shaping a suitable conceptual military environment." This contradiction is strong evidence for the importance of properly linking force development activities to political international policy goals. An institution must not rely solely on the frequency of the types of past military operations without understanding the policy context that led to the initiation of those missions.

[31] Murray, "Conclusion" in Murray and Mansoor, p.293.

[32] Ibid. See also McCulloh and Johnson who demonstrate throughout their study that context is critical. Indeed, their summary statement for "hybrid warfare theory" is "a form of warfare in which one of the combatants bases its optimized force structure on the combination of all available resources—both conventional and unconventional—in a unique cultural context to produce specific, synergistic effects against a conventionally-based opponent." See p.17.

factionalised and intra-societal rather than simply Taliban versus the Government of the Islamic Republic of Afghanistan, then perhaps the adversary was not understood.[33] Even if he is correct, it does not follow that, as the author contends, it "underscore[s] the importance, when intervening in an internal war, of understanding local politics." Rather, it underscores the importance of not intervening in conflicts which have no relation to the broad interests of the intervening states. The question should not be one of "what is required to succeed on the ground" but one of "why intervene?" This suggests that, long before any commitment of forces is made, strategic level intelligence capabilities must be employed to generate detailed political-strategic estimates of the potential adversary and the overall geopolitical context of a war. Only after this is done can a strategic cost-benefit analysis be made to help judge whether the costs of intervention are worth the potential outcomes.

This basic political-strategic calculus matters to scenario developers and others involved in force development for several reasons. The HWC paper argues that hybrid conflicts are likely to occur in failed or failing states, and implies that intervention in such conflicts is necessary in order to prevent the spread of instability and to ensure that that instability does not negatively affect international trade.[34] In essence, the justification for the inclusion of a hybrid warfare scenario is that the hypothetical war has the potential to threaten the broad economic interests of the intervening countries. This argument is not uncommon, and variations of this theme are present in almost all of the DND / CAF material noted in the previous section and reviewed in Annex A.[35] However, there is little empirical evidence to demonstrate that local or regional instability will as a *matter of course* result in broader, long term regional, continental, or global political or economic instability requiring the intervention by military forces.[36] It is certainly conceivable that conflict in certain key areas may seriously disrupt international trade (e.g. either Egypt or Panama because of the canals; the region of the straits of Hormuz, etc.). It cannot be said, however, that instability *anywhere* will lead to instability *everywhere* or that the economic effects, such that they might be, justify a military intervention. One must only look to the conflict in Syria, or the various conflagrations that afflicted the Balkan region in the 1990s to grasp that context matters.[37] Conflict will affect economic activity and certainly will affect the trading and retail prices of certain commodities. Undoubtedly the countries bordering a state in turmoil will experience negative effects to varying degrees of severity. However, there is no evidence that every fragile or failed state warrants intervention. Due to this the argument made in the HWC paper, that "nations have opted to act in their national interest in order to secure regional stability and security for international trade routes (i.e. an interest based foreign policy)" is, at best, tenuous. Clearly the

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[33] Mike Martin, "Britain didn't understand the enemy in Helmand," *Telegraph UK*, 10 April 2014. This article is a short summation of a recently published book-length monograph on the topic by Mr. Martin. The authors have not had the opportunity to read the longer monograph.

[34] CFD HWC, p.3.

[35] See for example *Designing Canada's Army of Tomorrow*, pp.15-22; Royal Canadian Navy, *Horizon 2050: A Strategic Maritime Concept for the Canadian Forces,* (DRAFT), circa 2012, p.9; Canadian Forces Aerospace Warfare Centre, *Projecting Power: Canada's Air Force 2035*, 2009, p.7; FSE 2008-2030 pp.1-3, 33-34.

[36] For example, the original CFD FSE (2008-2030) states that because of globalization, "Migration, diasporas, and urbanization in the developing world are of concern because instability and conflicts not only attract global attention, they will also likely require international intervention at some point." (p.33)

[37] Using Syria as an example, global economic activity is only now being affected by the larger issue of the movement of the Sunni fundamentalist group ISIS from Syria into Iraq and the consequent disruption to Iraqi oil production.

problem is different if one is considering conflict between regional or larger powers or blocs, but that is not the issue at hand. The issue in question is the assumption, almost universally cited by much hybrid warfare literature, that intervention in failed and fragile state scenarios is an automatic imperative.

As a rationale for intervention, those involved in force development should treat this justification for intervention cautiously because absent a clear and present threat to the national interests of an intervening country, the basic strategic characteristics of the type of intervention called for in the HWC paper favour only the hybrid force. Given the lack of a consistent trend demonstrating linkages between small wars, the viability of global economic activity, and Canadian national interests, a more plausible scenario would demonstrate an existential threat to the safety and well-being of Canadians. An example of this might be the CAF contributions to the initial phases of Operation Enduring Freedom (OEF) in 2002. Even where the CAF might be committed to interventions on supposedly altruistic policy grounds, such as Chapter VI 'peacekeeping' missions during the Cold War, there are likely to be more plausible grounds for commitment rooted in clear national interest terms.[38] Alternatively, the hybrid warfare scenario could fall out of a scenario in which hybrid or irregular forces are a feature of a conflict between regional and/or global powers, as in the current situation in Ukraine. Another scenario option might be, as former U.S. Secretary of Defense stated, one where a nuclear armed state has collapsed into chaos and criminality.[39] Currently, there are very few countries that might fit such a scenario, Pakistan and North Korea being perhaps the most plausible. The HWC describes a scenario that, geography aside, could be seen as very similar to a total collapse of Pakistan. This scenario though, reads as such a worst case event that represents a likely worst-case outlier rather than plausible for force development purposes.

Beyond this, the most important strategic characteristic of hybrid wars is that absent a clear existential threat to Canada, the long war character of hybrid conflicts is an asset to the hybrid adversary and a detriment to the intervening force. In such cases, time allows for defensive delaying strategies that stretch the length of a conflict and enable the adversary to promote its narrative and undermine the will of the intervening state.[40] Such delaying strategies play to the typical hybrid adversary strengths. Furthermore, like successful insurgent groups, they tend to have some measure of support amongst the population of the geographic territory in which they operate. In situations where the hybrid actor is conducting an insurgency, they are also enabled by the requirement to create only the perception of instability; the onus to provide security falls to government forces (and, often, intervening allied forces). For the government and its supporting forces this is a task that places large demands on human and fiscal resources. This in turn creates circumstances ideal for the use of propaganda by the hybrid actor as a core strategic tool.[41] The propaganda will clearly link the behaviour of the hybrid adversary to the strategic goals as

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[38] See Sean Maloney, Canada and UN Peacekeeping: Cold War by Other Means. Vanwell: St. Catherines, 2002.

[39] Robert Gates, "A Balanced Strategy: Reprogramming the Pentagon for a New Age," *Foreign Affairs*, January / February 2009.

[40] Penny Mellies, "Hamas and Hezbollah: A Comparison of Tactics," in Farquhar, p.60. See also McCulloh and Johnson, p.17.

[41] This is well understood but also identified as a core principle by McCulloh and Johnson, p.16.

articulated in the sustaining narrative.[42] The intervening states must be able to do the same, which implies the requirement for clear strategic goals, and strong structures, processes, and organizations that can facilitate the overarching strategic communication tasks that help explain military activities to domestic and international audiences. The opposite also holds true: as John Ferris has pointed out, an important part of Britain's ability to gain and manage empire was the inability of many hybrid adversaries to establish realistic strategic-political goals.[43]

The typically defensive, or limited offensive strategies adopted by many hybrid actors are partially predicated on, first, an inability to undertake sustained offensive actions because of organizational and capability weakness, and a strategic calculus that assumes Western states cannot or are unwilling to sustain long drawn out conflicts that drain fiscal resources and cause steady, if minimal, attrition of lives.[44] This is not an implausible assumption. Seth Cropsey, a former U.S. Deputy Undersecretary of the Navy, has raised questions "about whether Americans will tolerate a chain of small wars justified by preventing states from failing, denying safe haven to terrorists, increasing greater regional security, and promoting democracy."[45] He further points out that such 'small' wars, incidentally of the sort frequently cited by hybrid warfare proponents, often present little existential threat to the US (or, by extension, primary allies such as Canada), but are tremendously expensive in fiscal terms.[46] The point is that such wars require extended commitments, particularly of land forces, but often produce doubtful results.[47] In such situations the hybrid adversary does not have a requirement to militarily defeat the intervening force; fighting to a stalemate has often proved sufficient to further the hybrid adversary's strategic aims and shape the situation in such a manner that the will of the intervening power is undermined.[48] Unless there is a clear link to national interests the extended commitment of resources necessary to counter hybrid adversaries means it will be likely that long-term maintenance of national will may prove difficult. Therefore, the strategic advantage in hybrid warfare scenarios is more likely to be held by the hybrid actor rather than the intervening force. Despite the number of missions involving irregular actors or that might be seen as "unconventional" in character, force development scenario writers should bear in mind that not every conflict will or should require a

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[42] Mansoor, "Introduction" in Murray and Mansoor, pp.9-10. See also Maurice Tugwell, "Revolutionary Propaganda and Possible Countermeasures," PhD. Diss., London: King's College, March 1979.

[43] John Ferris, "Small Wars and Great Games: the British Empire and Hybrid Warfare, 1700-1970," in Murray and Mansoor, pp.223-224.

[44] The Winograd Commission identified the fear of sustaining casualties in the planning and execution of IDF operations as having an "exceptional effect" that was perhaps unwarranted (p.236, para.F). However, the commission had earlier stated that "a very high sensitivity to combatant casualties, sometimes at the expense of fulfilling important missions persistently – are partly related to changes in Israeli and Western society as a whole" (p.228, para.4). However, there is empirical and anecdotal evidence to suggest that Western public tolerance for casualties is directly tied to broad understanding and acceptance of a mission's relationship to national security. See for example Richard Lacquement's "The Casualty-Aversion Myth," *Naval War College Review*, Winter 2004, pp.38-57.

[45] Seth Cropsey, *Mayday: The Decline of American Naval Supremacy*. NY: Overlook Duckworth, 2013, p.132. See also pp.144-145.

[46] Ibid, pp.134, 138. Cropsey points out that the support of combat operations in the Middle East and Afghanistan had been consuming one-third of the entire US annual defence budget.

[47] Ibid, pp.144-145.

[48] For example, Hezbollah did not need to broadly defeat the IDF in 2006. It fought the IDF to a rough stalemate, which was sufficient for Hezbollah to not be perceived to have been defeated. See John Ferris, in Murray and Mansoor, pp.209-210; Mellies, in Farquhar, pp.60-61.

Canadian military intervention. Indeed, not every conflict is suited to a military intervention in the first instance.

3.1.2 Leadership matters: The political-military strategic factors

Despite the discussion above, it is difficult to determine in advance, and outside of specific context, how national interest can be defined or interpreted. In addition, it cannot be assumed that a situation meeting the national interest criteria will not occur. Thus it is prudent to consider further the implications of the 'Long War' characteristic. The historical literature related to hybrid warfare and that related to stabilisation, Peace Support Operations (PSO), and counterinsurgency (COIN), suggests that, as Russell Glenn has written, "the challenge posed is more than a military one alone."[49] Former U.S. Secretary of Defense Gates has similarly stated that "Future military challenges cannot be overcome by military means alone, and they extend well beyond the traditional domain of any single government agency or department. They require our government to operate with unity, agility, and creativity, and will require devoting considerably more resources to non-military instruments of national power."[50] Much like stabilisation, COIN, and peace support operations, it can be expected that military forces will be required to conduct a wide variety of activities in an effort to win over or maintain the support of the populace in the area of operations while simultaneously conducting such combat operations necessary to subdue the threat from the opposing force. Dr. Glenn rightly points out that conceptually, much of what is required to operate in such environments has been captured in the ideas of the Comprehensive Approach.[51] Current CAF doctrine defines the comprehensive approach in this manner:

> The application of commonly understood principles and collaborative processes that enhance the likelihood of favourable outcomes within a particular situation. The comprehensive approach brings together all the elements of power and other agencies needed to create enduring solutions to a campaign. These may include: military (joint and multi-national forces), Canadian government departments and agencies (whole of government), foreign governments and international organizations (e.g. NATO and UN), and publicly funded organizations (e.g. NGOs)[52].

The 'whole-of-government,' meaning Government of Canada specific component of the comprehensive approach is further described as: "An integrated approach to a situation that incorporates diplomatic, military, and economic instruments of national power as required"[53].

Conceptually, the ideas behind both the 'comprehensive approach' and 'whole-of-government' are applicable to all operations across the spectrum of conflict. Neither concept is limited to a particular type of threat actor (e.g. hybrid), so both are likely a useful framework to consider capability requirements during scenario analysis. This suggests the requirement to conceive

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[49] Glenn (2009), pdf version p.3.

[50] Robert M. Gates, 26 January 2008, as cited in Report of the Defence Science Board Task Force on *Understanding Human Dynamics*, March 2009, Office of the Under Secretary of Defense For Acquisition, Technology, and Logistics, p. xi.

[51] Ibid.

[52] *Canadian Forces Joint Publication CFJP 3.0 Operations*, September 2011, p.GL-3. This definition also appears in the Defence Terminology Database (DTB), entry record 34522.

[53] Ibid, p.GL-7. This definition also appears in the DTB, entry record 35242.

strategy, generate campaign plans to implement the strategy, strong inter-organizational processes that can adapt to reality as it unfolds, the ability to generate strategic communication to publicize and maintain the friendly force narrative, and some method of assuring that all-source intelligence is both distributed and assimilated by those with the power of decision, particularly, in the first instance, at the higher levels. Of course the reality is that the process described above, however well-organized or staffed, will not be neat or perhaps even logical and, above all else, will reflect the perceived priorities, assumptions, knowledge, and objectives at a given point in time, all of which are mutable and likely to change as a conflict develops.[54] This means that the political framework, narrative, the military strategic, operational, and tactical frameworks of the friendly force must be adapted to address the problems at hand to ensure no disconnect between the intended political ends and the military means applied to a problem[55].

The clearest, most forthright appraisal of such a situation from a recent conflict comes from the Winograd commission:

> We found no overall diplomatic-defense strategic vision that should have formed the basis and guidelines for specific decisions. We state categorically, that this impeded Israel from acting in an effective and coordinated fashion to achieve its diplomatic objectives and that it constitutes a failure. […] At every major deliberation juncture there appears to have been a certain degree of isolation between diplomatic negotiations—which dealt with the elements of the Resolution being drafted—and the required dynamics of a military operation, which could have achieved the desired gains. Moreover, as mentioned, we found no sign of systematic staff-work regarding ways of coordinating military operations with diplomatic measures or political and specialist echelon demands to present work of this type. The absence of a comprehensive concept of the relations between diplomatic objectives and a military operation apparently contributed to the fact that harmonization was often lacking between the standpoints of various individuals and agencies regarding specific points which they did not connect to a more overall picture of the military operation and the relationship between it and diplomatic objectives. […]Where the diplomatic effort mandated a certain level of military achievement, the decisions regarding the military operation and the diplomatic effort should have been coordinated and bound together from the viewpoint of the comprehensive concept of the operation, while being constantly adapted to developments[56].

The consequences of this political-military strategic disconnect was unnecessary casualties, due in part to the inadequate military means that constituted the primary Israeli Defence Force (IDF) response, a lengthened conflict, and the failure to achieve a satisfactory outcome.[57] It should be

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[54] Beatrice Heuser, *The Evolution of Strategy: Thinking War from Antiquity to the Present*. NY: Cambridge University Press, 2010, pp.489-490, 493-497.

[55] Mansoor, "Introduction," in Murray and Mansoor, p.3.

[56] Winograd Commission Report, pp.575, 576, paras.73, 75-77.

[57] All this said, there is also evidence suggesting that Hizbollah's leadership miscalculated what the Israeli reaction to the ambushing of the IDF patrol and the abduction of 2 IDF soldiers on 12 July 2006. Although in this instance Hizbollah fought the IDF to a stalemate, had Israeli leaders and forces acted differently the outcome could have been much worse for Hizbollah, emphasising the importance of understanding the political and strategic frameworks of one's opponent.

kept in mind that this situation occurred even though a clear existential threat to the Israeli people (Hezbollah's rocket capabilities) was apparent. The difficulty would only be magnified for any state intervening in a conflict where such a threat was not so apparent.

Such a demanding environment, where all the instruments of national power must be coordinated, demands above all strong leadership, starting at the highest political and military levels. The study of hybrid-type case studies yields the critical lesson that: "leadership is essential to victory in hybrid warfare."[58] This can be said for all warfare but, much like in counterinsurgencies, the delicate balance between offensive military activity and other activities necessary for success and the typically long duration of such wars demands educated and trained military and civilian leaders[59].

For the armed forces, the strategic characteristics of hybrid warfare suggest that education and experience in specific areas is necessary to prepare for higher-echelon and command responsibilities. "Examples of topics meriting attention include leading or participating in coalition operations, interagency orchestration, and governing."[60] The list of topics to be considered should not be limited to such things that fall under an armed forces mandate. For example, few would argue that CAF personnel should have any role in governing. However, education on such a topic will help prepare military officers to better understand the broader context of what they have experienced and what they might be participating in.[61] Inclusion of such topics in higher-level professional military education will also better prepare officers for fulfilling the responsibility to provide informed and measured professional military advice to civilian counterparts and political leaders.[62] The inclusion of government civilians in PME programs would also help to create extra-departmental relationships and broaden understanding of the various bureaucratic and organizational constraints that affect day-to-day activities. Such professional education is also important to understand when and how to use the various tools available to the government to meet its foreign policy objectives.

3.1.3   Alliances and hybrid warfare

A final strategic issue is the peculiar difficulties inherent to alliances in wartime, specifically with regard to alliances and hybrid warfare. On alliances, Clauswitz wrote that "One country may support another's cause, but will never take it as seriously as it takes its own" to underscore the reality that states will always look to their own interests before those of allies. Furthermore, he argued that individual members of an alliance will view contributions much like a business deal, with calculations of effort invested, at what risk, for what possible gain. He also wrote that "even when both share a major interest, action is clogged with diplomatic reservations, and as a rule the negotiators only pledge a small and limited contingent, so that the rest can be kept in hand for any special ends the shift in policy may require."[63] Although Clausewitz was writing of the system of

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[58] Mansoor, in Murray and Mansoor, p.17.

[59] Glenn (2012), pp.37, 66, 79. See also the Winograd Commission Report, p.381.

[60] Glenn (2012), p.79.

[61] Ibid., p.37.

[62] Ibid, p.79.

[63] All references to Clausewitz in this paragraph are from Book VIII, Chapter 6, "The effect of the political aim on the military objective," p.603 in Peter Paret and Michael Howard, eds., trans., Carl von Clausewitz, *On War*. Princeton NJ: Princeton University Press, 1976.

treaties and alliances that characterised European politics in the 18th and 19th centuries, his observations are highly relevant to any discussion of contemporary warfare.

The scenario described in the HWC sees the intervening coalition consisting of Canada, three traditional Canadian allies (USA, France, UK), and a non-traditional coalition member (China). Alliances and coalitions are bound only by such common interests that may intersect and the concept paper posits that the shared national interest is one of ensuring conditions for global trade. However, as the discussion above points out, there is little evidence to support the notion that local intrastate conflict necessarily leads to broader regional or global insecurity. There is also little evidence that such conflicts, in general, lead to severely disrupted global trade. We have also seen that there are close similarities between contemporary COIN campaigns and the discussions of hybrid warfare. To paraphrase one author, the question must be asked as to whether, given the typical characteristics, hybrid wars can be successfully fought by an alliance? Are such situations "suitable for a multi-national contingent composed of military and civilian contributions from a wide array of countries with different strategic cultures and visions"[64]?

The questions are valid. We have seen that hybrid wars tend to be long wars. We know that political will power is often a major factor in such conflicts. We have seen from history that the few successful counterinsurgency campaigns have largely been conducted by a single state or by a coalition with one state contributing the overwhelming majority of resources and relatively minor contributions from other coalition members. Indeed, looking back through history, the strength from alliances or allies seems to favour the hybrid actor, not the intervening force. Whether one considers Hezbollah, some of the various factions supported by Iran during the war in Iraq, the forces that ultimately prevailed in Viet Nam, Native American support to British regular and militia forces during the War of 1812, French support to rebel American forces during the Revolutionary War, or, in many cases the forces that fought during earlier times in what Eliot Cohen has called 'the great warpath' stretching from Albany NY to Montreal all benefited, and were to varying degrees sustained by the support of a state.[65] This includes cases where the state actor provided support in the form of arms, munitions, logistics, training, or otherwise assisted with necessary functions, and in cases where the state used irregular forces or contributed forces to create an operational and tactical advantage.

While the conflict in Afghanistan does not meet all of the requirements to be considered a hybrid conflict (clearly those acting against ISAF and GIRA do not consistently meet the heightened capability measure of a hybrid actor) the difficulties NATO has faced in reaching and sustaining sufficient capabilities in theatre are probably similar to what would be faced in a coalition hybrid warfare context. As Ringsmose has argued, the absence of an existential threat to the NATO allies has meant that "the incentives to cooperate and contribute the required resources [are] even smaller than in periods with a clear-cut threat to the national security" of the individual states.[66]

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[64] Both the paraphrased question and the quotation are from Jens Ringsmose, "Conducting Counterinsurgency by Alliance: Wave of the Future or Strategic Dead End?" in Karl Haug and Ole Maao, eds., *Conceptualising Modern War*. NY: Columbia University Press, 2011, p.164.

[65] It is widely recognized that Hezbollah has greatly benefited from Iranian, Syrian, and North Korean support. See Matt Matthews' and Penny Mellies respective chapters in Farquhar, or Christopher Bowers, "Identifying Emerging Hybrid Adversaries," in *Parameters*, Spring 2012, pp.39-50. For an overview of Chinese support to communist forces in Viet Nam see Asprey. On 'The Great Warpath' see Cohen.

[66] Ringsmose, in Haug and Maao, p.174.

Thus we see that Clauswitz' arguments on alliances is as true today as when he wrote. It can only be surmised that faced with a more capable adversary, as presumed by the characterisation of hybrid actors, fighting that adversary with a coalition of states that are not directly threatened by the enemy will be even more difficult. It is reasonable to argue that the political leaders of contributing states will have a difficult time maintaining public support in a situation where increased friendly casualties are probable.

Individual coalition member state political and military strategic frameworks is also an important factor to consider. While traditional and perhaps even non-traditional coalition partners might be able to reconcile differing tactical and operational frameworks, it is unlikely that the differences between the political or military strategic frameworks of the contributing states could ever be fully reconciled absent an existential threat to all coalition members. While the differences between traditional allies can likely be mitigated sufficiently for a coalition to function, doing the same with a non-traditional coalition partner, especially a partner as powerful and ambitious as China, is much less credulous.

This is not suggesting that it is not possible to have a hybrid warfare scenario in which the threat to international security is so dire that intervention is widely called for and relatively easy to justify to the publics of states contributing forces and resources. The argument simply is that there is scant historical evidence that interventions in scenarios such as that posed in the HWC paper are realistic from a strategic perspective. Also, it is certainly justified to include non-traditional coalition partners in certain force development scenarios. For example, including such partners in scenarios testing the ability to conduct operations in a lower threat environment, or those taking place in global commons that demand an international response, such as anti-piracy[67] or counter-proliferation missions would be prudent. However, in scenarios where combat against a capable enemy is probable the factors auguring against plausibility will remain significant.

This section has highlighted three major strategic-level characteristics of hybrid warfare. First, those wars that might be classified as hybrid have been long wars. The implication from this is that sustaining the will to continue the fight is a primary consideration. For states contemplating intervention in such scenarios the evidence suggests that the linkages between the conflict and national interests must be strong and clear in order to establish and maintain public support for a mission that may prove more than a decade in length. Second, hybrid conflicts have typically demanded strong leadership, well-informed decision making, and comprehensive strategies that enable the application of all facets of state power to achieving a suitable resolution to the conflict. As with any warfare, the linkages between desired political ends and the military means being applied must be clear and well understood. Third, there is no sustained body of evidence suggesting that alliances can successfully prosecute warfare against hybrid adversaries. If one general strategic-level conclusion can be made it is that thus far in history the strategic advantage typically lies with hybrid belligerents during conflict.

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[67] Andrew Erickson and Austin Strange, *No Substitute For Experience: Chinese Antipiracy Operations in the Gulf of Aden*. US Naval War College, 2013.

3.2 **Operational level**

Despite the evidence suggesting that strategic level advantage lies with the typical hybrid adversary, it is prudent to assume, for force development purposes, that the CAF will face such adversaries in the future. Given this, the pertinent question for this section is what are the key operational level issues when facing an adversary with hybrid capabilities?

The HWC paper argues that hybrid opponents will "seek to combine conventional, irregular, and high-end asymmetric methods concurrently, often in the same time and space across the domains of land, air, sea, space, and cyber space." The concept paper argues that hybrid warfare is characterized by "dynamic opponents, using innovative means facilitated by commercial off-the-shelf technology (COTS) and some near-peer weaponry" and that "it is much easier for non-state groups to prepare for operations in this environment than building a professional military." It continues: "Today hybrid warfare is sophisticated. Tomorrow, state and non-state actors waging this type of war will continue to hone their skills, learn from others, improve tactics and acquire new weaponry and technology."[68] This is very similar to Frank Hoffman's argument that:

> Hybrid threats blend the lethality of state conflict with the fanatical and protracted fervor of irregular warfare. In such conflicts, future adversaries (states, state-sponsored groups, or self-funded actors) exploit access to modern military capabilities including encrypted command systems, man-portable surface-to-air missiles, and other modern lethal systems, as well as promote protracted insurgencies that employ ambushes, improvised explosive devices, and assassinations. This could include states blending high-tech capabilities such as anti-satellite weapons with terrorism and cyber warfare…[69]

Thus, the primary argument is that hybrid actors have, are able, and will be increasingly adept at mastering what is termed by Western militaries as the 'operational art' much more effectively than conventional militaries. But is this actually the case? As one group of sceptical authors has written, proponents of hybrid-threats thinking "imagine an enemy of nearly mystical powers."[70] The hybrid concept paper, and most advocates of hybrid warfare thinking, assume a very high degree of adversarial capability but "in order to execute all of their supposed tasks simultaneously or in close sequence, any hybrid threat would have to be highly proficient in a wide variety of modes of warfare, an idea that strains the bounds of reality"[71].

The operational level of war is defined as "The level at which campaigns and major operations are planned, conducted, and sustained to accomplish strategic objectives within theatres or areas of operation."[72] Operational art is defined as "The employment of forces to attain strategic and/or operational objectives through the design, organization, integration and conduct of strategies, campaigns, major operations and battles."[73] Simply put, operational art is the difficult but crucial set of staff activities meant to link the tactical and strategic levels in a coherent manner. It is at this level, with these activities, that the political intent is considered, plans are drafted and

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[68] All quotations from CFD HWC, p.2.
[69] Hoffman (April 2009), p.5.
[70] Cox, Bruscino, and Ryan, p.26.
[71] Ibid.
[72] DTB Entry Record #33093.
[73] DTB Entry Record #32692.

updated, necessary deployed force levels are determined, force posture and readiness is assured, logistics coordination takes place, and the conditions are created for tactical level tasks to be executed. Operational art is the understanding of how to employ and coordinate all capabilities to achieve the desired strategic ends.[74] This is more than being tactically adept; in many ways it is the ability to be proficient at the operational art that is one of the important asymmetric advantages modern state militaries have over hybrid adversaries. Of course this assumes that the armed forces of a state are proficient at the operational art.[75] The question then becomes one of what is required to enable proficiency in the operational art?

Along with strong leadership, an important factor noted above, military effectiveness at the operational, and by extension the tactical level, requires:

1. Good weapons that are commensurate with the need and are in the right mix;

2. Having those weapons in the hands of well-organized military formations; and,

3. A fighting style in which both leaders and troops are indoctrinated and that is right for the conditions.

In short, the basic requirements for effective militaries are "material that is right, organization that is right, and ways of operating that are right—all for the here-and-now—plus superior troop leadership."[76] Explicit in these requirements is the importance of understanding the enemy, including their capabilities, motivations, goals, and probable fighting methods. Given the ambiguous character of contemporary strategic and long-term threats, this suggests it may be exceedingly difficult to discern what the appropriate weapons may be. With regard to organization, the importance of 'jointness,' or the integration of the capabilities of the modern force, should probably remain one of the foremost factors in enabling the application of operational art and speaks to the military component of the comprehensive approach. Finally, an appropriate "fighting style" implies the need for a suitable and commonly accepted operational concepts and doctrine that will guide the intellectual process of the operational art and the employment of forces.[77] The historical, social, and cultural context of a state's armed forces affect how it fights and constitute the less formal, and perhaps unwritten component of concepts

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[74] See McCulloh and Johnson, particularly the second half of the paper, for similar descriptions of operational art. To better understand the practical application of operational art, McCulloh and Johnson describe the context-specific use of operational art as 'operational approach.' See p.66.

[75] This of course assumes there are clear strategic objectives, emphasising the importance of the discussion in the previous section.

[76] Both this quotation and the three numbered requirements for effective military forces are from John Cushman, "Challenge and Response at the Operational and Tactical Levels, 1914-1945," in Allan Millett and Williamson Murray, eds., *Military Effectiveness, Vol. 3: The Second World War* (new edition), NY: Cambridge University Press, 2010 (1988), p.332.

[77] Although the description of "operating" and "operational" concepts in the June 2005 *CDS Action Team 2 Report* "Concepts for Integrated Force Development, Integrated Force Generation, and Coalition Advocacy" is somewhat confusing, the basic point that such concepts form framework guidance for an armed forces operational approach remains valid. See pp.2-13, 2-14.

and doctrine.[78] With this in mind the next part of the question to consider is the operational level characteristics of hybrid forces.

Historically, successful hybrid forces have fought by using the weapons and people available in such a manner that limited exposure to the stronger military capabilities of their adversaries or made advantage of known adversary weaknesses. Methods are dictated by what is available to and, to a degree, the capabilities of the adversary. Furthermore, hybrid forces, like conventional militaries, are influenced by social, cultural, and historical factors.[79] It is telling that, as Colin Gray has argued, the more capable a group becomes, the more they tend towards the characteristics of a conventional military force.[80] For example, as Hezbollah's capabilities improved over time, units began wearing identifiable uniforms, implemented standard training, and created more formal command and control networks. This led to a general improvement in combat proficiency, most importantly through the coordination of capabilities.[81] The point is that the hybrid adversary is not simply any belligerent "that engages in multiple forms of warfare."[82] It is the organized coordination of capabilities employed purposefully towards common ends that distinguishes the more capable actors.

Christopher Bowers has identified three characteristics of hybrid actors. Two of these are equally applicable to modern military forces. These are: maturity, capability, and complex terrain.[83] Maturity describes the degree of organization and cohesion; depth of leadership; responsiveness to internal leadership and external forces (state sponsor); support of a population; evidence of long-term goals and the ability to collectively pursue achievement of those goals.[84] To be classified as a hybrid adversary the group must be able to field, employ, and sustain some of the capabilities of a modern military. It is not enough to use a weapon once or twice; a hybrid adversary must be able to train personnel in the effective, combined, coordinated use of multiple weapons systems and have a means by which the logistics necessary to sustain those systems are assured. It is commonly stated that the proliferation of weapons is an increasing problem in the future operating environment. However, as Bowers and others have argued, while the simple operation of a weapons system might be possible, the effective tactical employment of even a single system is not intuitive.[85] For example, even though the use of COTS GPS technologies simplifies some of the problems of effective indirect fire, integrating indirect fire in support of manoeuvre elements is a much more sophisticated activity. Integration of this sort requires training, organization, and beyond rudimentary command and control.[86] Finally, Bowers argues that "complex terrain is critical in enabling a hybrid adversary to effectively confront a modern military opponent. The less complex the geographic and human terrain, the more a modern

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[78] McCulloh and Johnson, p.66.

[79] Christopher Bowers, "Identifying Emerging Hybrid Adversaries," *Parameters*, Spring 2012, p.40. See also Cox, Bruscino, and Ryan, p.26. See also Timothy McCulloh's summary statement in McCulloh and Johnson, p.17.

[80] Gray, p.215.

[81] Biddle and Friedman.

[82] Bowers, p.40.

[83] Ibid., p.39.

[84] Ibid., p.43.

[85] Ibid, p.41. See also Biddle and Friedman, pp.65-77.

[86] See for example http://abcnews.go.com/Technology/syrian-rebel-ipad-aiming-mortar/story?id=20296936 Accessed 28 February 2014.

western military will be able to leverage its advantages in size, material, and technology to gain a decisive advantage"[87].

The first two characteristics, maturity and capabilities, are also the foundation of state, or conventional, military forces. This strongly implies that the major advantage effective conventional militaries hold over hybrid adversaries is the possession of sustained capabilities and the ability to conduct operational art. This conclusion is in contrast to the typical arguments of advocates of hybrid thinking. For example, the HWC argues "The operational requirements to achieve success in such an environment are distinct from the operational requirements to achieve success in a near peer state-on-state conventional conflict; the former concerns operations against a state, the later [sic] concerns operations within a failed or failing state."[88] Such arguments tend to mistake the inherent strengths of a modern military force for a weakness, suggesting that the difficult operational environment demands a military force more similar to the posited enemy.[89] This is counterintuitive as it implies that the solution lies in divesting the advantages possessed by the modern military force. It is not enough to have access to modern weapons systems. A capable military force, whether regular or irregular must be able to effectively employ and sustain those systems in a coordinated fashion as a means of achieving strategic ends.

This should not be misconstrued as an argument that a conventionally organized force is necessarily the most appropriate for all circumstances. A highly competent conventional military can use irregular means to effectively counter an adversary if such means are suitable to the situation.[90] Thus, the use of irregular forces or the use of special operations forces is entirely consistent to the argument being made so long as the limits of the capability are understood and the activities are coordinated. The pertinent issue is that SOF capabilities must be employed in coordination with all other capabilities as required by the specific context. For the conventional military, operational and tactical advantage is created by the coordinated employment of irregular capabilities (SOF). On a slightly different tack, allied forces seeking strategic and tactical advantage might embrace hybrid irregulars when broader goals align. The risk of course is that a conventional military may have limited command and control influence over such an ally.

Nevertheless, proficiency in the operational art is difficult to attain and is perishable. As the IDF experienced in 2006, the adoption of contextually unrealistic or insufficiently developed concepts, in this case Effects Based Operations (EBO) and Systemic Operational Design (SOD), can lead to military defeat or, at best, less-than-ideal outcomes.[91] The rapid and wholesale replacement of more traditional operational methods with these concepts, although not wholly responsible for the unsatisfactory outcome of the 2006 war, certainly contributed to the situation.[92] Reorganized 'distributed' command and control responsibilities, an undue faith in the potential effects of precision fires, the belief that precision fires could replace requirements for ground manoeuvre, and the use of "novel" language vice standardized military terminology, contributed to what has

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[87] Bowers, p.45. Bowers includes cyberspace in his discussion.

[88] CFD HWC, p.13.

[89] Ibid., p.2, para.4.

[90] On SOF as the irregular component of a conventional force see Gray, pp.248-254. For examples of regular forces employing irregulars see Ferris in Murray and Mansoor, pp.199-224.

[91] Winograd Commission, in particular Chapter 7, pp.251-265; 307-311; Mathews in Farquhar, pp.10-12; Glenn (2012), pp.19-22.

[92] Winograd Commission, pp.308-310.

been described as "an intellectual virus [that] was distorting the IDF's fundamental doctrine."[93] The most serious result of the use of such "jargon," described as "flowery" and "fuzzy, unclear, confusing, and empty of any real content" was the manner in which it "penetrated into the procedures and commands" (orders).[94] This was not the intent of the concepts but the language nonetheless "interfered with the application of simple principles of common sense on the reality."[95] Such issues are not unique to the IDF; one assessment of the command of British land forces during a portion of Op Telic in Iraq identified similar problems.[96] The Winograd Commission correctly cautions that these ill-applied concepts were not solely responsible for the problems experienced during the 2006. However, given the proliferation of defence concepts and theories over the past several decades this, and later rejection of EBO by US forces, suggests that caution is warranted when considering more than minor adjustment to methods proven over time to contribute to the creation of the operational advantages of conventional military forces.

This is not an argument for stasis. Adaptability, flexibility, and the capability to learn from operations are, and will remain critical characteristics of effective conventional and irregular military forces. What the evidence suggests is that operational level capabilities must be robust and that sound strategic rationale and clear strategic goals are critical for effective, flexible, and adaptable operational level planning. Failing chance or some unforeseen event undermining the ability of the adversary to continue, there is no proven alternative obviating these facts. The inherent strategic advantages of the hybrid adversary cannot be overcome by any amount of operational or tactical effectiveness. The military force placed in a strategically tenuous situation can do little but buy time (in the cost of casualties and the expenditure of fiscal resources) until such time as strategic conditions might be altered by political and, potentially, other factors outside the area of operations.

3.3   **Tactical level**

If operational virtuosity is the hallmark advantage of the conventional over the contemporary hybrid force it stands to reason that highly proficient tactical level forces are the basic requirement for effective modern conventional forces facing hybrid adversaries. This conclusion is supported by the Israeli experience in the Second Lebanon war and the US experience in Vietnam where tactical level success was more often than not the norm. Conversely, the uneven performance of the British Army during the American Revolutionary War (and, for that matter, the various battles in North America in the 30 years or so prior to the onset of the Revolution) also demonstrate that tactical proficiency is the basic starting point for countering the hybrid adversary.[97] The bottom line is that to counter the presumed capabilities of a generic hybrid

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[93] Matthews in Farquhar, p.11; see also Winograd Commission, pp.283-284. The Commission described the situation as a "deficiencies in the consciousness of the Israeli Defence Forces." The fundamental doctrine of the IDF would be equivalent to "mission command" in CAF doctrine.

[94] Winograd Commission, p.257.

[95] Ibid.

[96] LCol J.P. Storr, *The Command of British Land Forces in Iraq, March to May 2003.* British Army Directorate General of Development and Doctrine, circa 2004.

[97] Some of the founding myths of the US are based upon notions of the supposed superiority of the British Army. However, John Shy has demonstrated that the state of British Army in North America at the start of the war was much less impressive in terms of training, discipline, and preparedness than has been commonly held. See in particular the concluding three chapters of John Shy, *Toward Lexington: The Role*

adversary the opposing force must be capable of generating and sustaining effective tactical level combat power.[98] Assuming some form of failed / fragile state scenario, as most of the DND / CAF force development literature does, it will not be possible to begin to tackle the underlying causes of instability if the geographic space cannot be made reasonably secure. At the very least, conditions must be amenable to the type of activities required to develop and train host nation security forces.

For land forces this means that the fundamentals of proficiency in small unit tactics, fire and manoeuvre, the use of camouflage and concealment, and all the basic skill sets necessary for a modern military force to be considered competent and effective in combat will remain essential. For aviation, the provision of fire support, reconnaissance, contributing to battlefield mobility, casualty evacuation, providing liaison and forward controllers, not to mention establishing and maintaining air superiority, are critical.[99] For naval forces the requirements include establishing and enforcing blockades, providing fire support, providing sea-based aviation support, and, perhaps less intuitively, conducting brown water operations. SOF will remain the critical irregular component of the modern conventional force. Indeed, as was seen in Operation Unified Protector, air, naval, and Special Forces supporting a hybrid belligerent can lead to the achievement of campaign objectives without the use of larger land forces. Fully exploiting these modern capabilities is predicated on responsive intelligence at all levels, with the expectation that, like all COIN or stability campaigns, demands for intelligence of all types will be exceedingly high. Although little mentioned in the discussion above, cyber capabilities, which should now be considered a conventional capability required for all campaign themes (even if the structure of agencies in a particular state assign these to a non-defence agency). If the operational context is a failed / fragile state it is likely that operational mentoring, or the ability to provide security force assistance (or what has been known in the past as foreign internal defense) will prove important. Potentially, this includes the development of air, maritime, and land security forces. In fact, given that the hybrid belligerent, like many irregular forces, simply needs to create perceptions of instability while the intervening force must broadly provide security, a viable host nation partner is likely essential to success in such conflicts. Important as well are combat engineering capabilities that can assist in restoring critical infrastructure. However, this begins to seem like a laundry list of capabilities and doesn't address one of the fundamental problems that led to the hybrid warfare debate in the first place: how to prioritize defence force capabilities within fiscal and other restraints, to enable the forces to conduct both the most likely missions (smaller wars) and less likely but more demanding operations against conventional adversaries?

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of the British Army in the Coming of the American Revolution. Princeton: Princeton University Press, 1965. For examples of how some of the British themselves overestimated the capabilities and preparedness of the British Army see Williamson Murray, "The American Revolution: Hybrid War in America's Past," in Murray and Mansoor, pp.72-103. For discussion of the uneven tactical performance of the British Army see Murray "The American Revolution," but also the first 8 chapters of Cohen.

[98] Combat power is defined as "the total means of destructive and/or disruptive force which a military unit/formation can apply against an opponent at a given time." DTB Entry Record 3815.

[99] See in particular the concluding chapter in Corum and Johnson. Historically, the use of air power by hybrid forces tends to be limited but would include the defensive use of fighter aircraft by North Vietnam, the use of airpower by combined US-Afghan anti-Taliban forces in the opening phase of OEF, the use of NATO airpower in support of anti-Ghaddaffi forces in Libya in 2010 – 2011, and Israeli fielding of a variety of aircraft in the 1948 war. One might also include the use of the single aircraft available to the Katanga rebels in the 1960-64 conflict in the Congo. See Dorn. It is highly probable that hybrid adversaries in coming years will employ unmanned aircraft of various forms for at least ISR purposes.

The calculations feeding prioritization of capabilities will be different for each state. Factors that will be considered include policy, strategic government intent, determinations of vulnerability based on threat and risk, the frequency of types of missions (discretionary or otherwise), available fiscal and human resources, and more. For smaller militaries, high on the list of important factors should be the preservation of core capabilities at times when budgetary pressures increase. For example, the CAF currently requires recapitalization of some major core capabilities. Simultaneously, there is demand to develop new capabilities, particularly those suited to the space and cyber domains. The ever-present requirement to absorb and improve the force based on lessons from more than a decade of high-tempo expeditionary operations contributes to the demand for resources. In an era where threats to a country like Canada can be ambiguous and the military role in countering some of those threats limited, the preservation of core conventional capabilities that constitute the foundation for effective military forces seems prudent.

This argument does not ignore the tactical lessons of Iraq and Afghanistan any more than it is wishful thinking for a preferred type of warfare, as some have argued.[100] Not all concepts or conceptual debates have the same implications for all states. The implications of the hybrid warfare debate for the US will, or should, be different than those for Canada, or, for that matter, the UK. The size of the CAF compared to the expectations of government based on current defence policy, mean that while it may seem ideal to focus on the skill sets that allow for tea drinking, using the example of retired British Army Captain Mike Martin,[101] that particular skill set may not represent a foundational skill for a modern military. In an era of ambiguous threats, it is critical to understand what it is that forms the basis for military effectiveness as much as it is important to stand ready to adapt as necessary when threats become more clear. This does not deny that "the capabilities necessary to wage asymmetric war or irregular conflict"[102] are not important. Rather, it is an argument to not misunderstand conventional strengths as encumbrances from times past or fundamental weaknesses.

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[100] See for example Martin.
[101] Ibid.
[102] Gates (2009).

4   Conclusion

Canada is fortunate in that geography blesses it with oceans on three sides and a trustworthy continental ally as bulwarks against many of the types of threats faced by other countries. For Canada, the implications of the hybrid warfare discussion are not the same as those for the US, UK, Israel, or other countries. Those involved in force development should keep this in mind. Canada's fortunate geography and geopolitical circumstances mean that, unlike during the Cold War, when the sustained forward deployment of expeditionary forces was necessary, many expeditionary missions conducted by the CAF in the past 15 years, or posited in force development scenarios are, arguably, discretionary.

With this in mind, it can be said that the discussion of hybrid warfare debate is useful. It highlights the convergent effects of a number of trends such as the dissemination of technology, the proliferation of military systems (particularly small arms and light portable crew-served weapons), and the difficulties of conducting operations in areas where tribal, religious, and ideological motivations outweigh, or obviate, efforts to establish functional nation-states. The discussion also emphasises the historic fact that hybrid actors tend to possess certain strategic advantages. There are four primary implications for the CAF that fall out of the discussion. The first is that conventional military capabilities remain relevant but they must be adaptable. Hybrid actors strive to develop the core characteristics of conventional militaries as they mature. It is important to understand that this is because those characteristics tend to lead to effectiveness in battle. Moreover, if proficiency in the conduct of operational art constitutes the primary conventional military force operational advantage, it necessarily speaks to the importance of the individual and collective training and professional development necessary for establishment and sustainment of this skill.

Second, it is apparent that a conventional force bolstered by irregular forces has a greater chance of success in conflicts not characterised as state-on-state. While it has not been the focus of this paper, it is plausible to suggest that conventional militaries intervening in conflicts typical of failed / fragile states should perhaps only do so when a viable irregular partner is physically and politically available. Alternatively, decisions to intervene in support of a host nation government should consider whether the host nation security forces are viable and whether the adversaries acting against the host nation government possess the characteristics and the geography historically shown to be requirements for long-term success.

Third, if (as hybrid warfare proponents tend to argue), it proves to be the case that robust interventions in failed / fragile state scenarios is to be the typical expeditionary mission of the CAF and its allies it may be necessary to reconsider the capabilities of other government departments. Such campaigns call for intense and sustained capacity building, reconstruction, and development activities. It may be time for serious reconsideration of deployable capabilities more appropriately resident in other departments and agencies to allow more focused application of the defence budget.

Fourth, those involved in force development should weigh carefully the strategic justification for any scenario, or decisions, predicated on assumptions that instability anywhere requires military intervention to limit disruption to global economic activity or to ensure regional stability. Canada's strategic circumstances allow considerable latitude in determining when, where, and

how to employ military force. This is a luxury not enjoyed by some of our allies, particularly the US. The "messy" character of hybrid conflicts, and the lopsided strategic advantages historically held by hybrid actors is sufficient warning that military intervention may be more costly and less effective than desired. This is not a Canadian-specific conclusion. Credible commentators in the US are questioning whether the long-term commitment of military forces typically necessary for hybrid-type conflicts is the best means of assuring the protection of national interest in contemporary times.

Ultimately, the conclusion must be made that those involved in CAF force development activities must consider the broader historical context when considering the importance of hybrid warfare for future capability and force structure decisions.

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Annex A DND/DAF force development usage of hybrid warfare

A survey of current DND / CAF documents for usage of 'hybrid warfare' reveals that, much like the broader literature on the subject, there are as many definitions, interpretations and uses as there are writers.[103] Unfortunately, this may cause confusion in understanding the implications this characterization of warfare may hold for strategic level planning, including force development. In general, the discussion below will show that while there is little definitional uniformity, the documents reviewed do note similar characteristics of the anticipated operating environment. Unsurprisingly, many of these characteristics are similar to those found in hybrid warfare material.

CAF/DND 2013-2040 Future Security Environment (FSE)

In its overview of current and emerging military trends, the recently completed CFD *Future Security Environment 2013-2040* (FSE) notes many of the same trends cited by those writing of hybrid warfare. The blending of tactics, the variety of actors in the battlespace, the availability of military-grade weapons, and the innovative use of civilian technologies are all noted.[104] While the FSE employs the term "hybrid," it is done so sparingly and with the caveat that it "is simply meant to illustrate the blending of conventional and irregular (or asymmetric) approaches to warfare."[105] The FSE also notes that hybrid actors typically need only forestall a decisive Western victory. In addition, the FSE notes that conventional Western forces possess considerable operational and tactical strengths when compared to a hybrid adversary but that adapting to the irregular character of hybrid adversaries can prove challenging.[106] The FSE reflects the literature on hybrid warfare in that it discusses the main points of both those that advocate the concept and those that are more cautious in accepting the term.

RCAF: Projecting power

In the 2009 document *Projecting Power: Canada's Air Force 2035* the RCAF, similar to the new CFD FSE, uses 'hybrid' sparingly.[107] While this may be reflective of the nascent state of the hybrid warfare debates in the literature in 2009, the 2035 document also notes several times that the RCAF must assume that it will face both state-based conventional forces and non-state irregular forces in the future operating environment.[108] Due to this, the RCAF believes its potential mission roles will evolve in order to properly face the challenge of hybrid adversaries.

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[103] Russell Glenn discusses the inconsistent usage of the various manifestations of hybrid warfare in his article "Thoughts on Hybrid Warfare."

[104] Chief of Force Development, *The Future Security Environment 2013 – 2040*. See in particular Chapter 4.

[105] Ibid, p.103.

[106] Ibid, pp.103-105

[107] Canadian Forces Aerospace Warfare Centre, *Projecting Power: Canada's Air Force 2035*, 2009, p. 33.

[108] Ibid, p.26, 30.

The hybrid adversary poses a challenge because "irregular adversaries will likely be composed of poorly defined groups hidden among a larger population base rather than being a well-equipped, traditional military."[109] Somewhat strangely, the 2035 document also states that "Relatively small irregular forces will always be capable of nullifying many of the advantages that sophisticated air forces possess, and that this pattern can be expected to continue in the future."[110] This unequivocal statement is not supported with any useful evidence and is not expanded upon. Nevertheless, the discussion of irregular warfare highlights the legal concerns, ethical dilemmas and difficulties of identifying belligerents in a hybrid context. "These opponents are likely to deliberately incur civilian casualties either in support of their objectives or to simply demonstrate their own power. These adversaries will be harder to identify; their actions will be less conducive to anticipation or deterrence."[111] Therefore, for the RCAF, knowing how its conventional capabilities can be effectively used in this context will be an important issue to address.

The RCAF wisely concludes that it "can fully expect to continue executing missions across the entire spectrum of conflict." However, referencing the Second Lebanon War, the observation is made that it "will find itself constantly challenged by the FOE and will always have to assess where aerospace power can be most effective, while at the same time avoiding its inappropriate application."[112] The conclusion from this is that the RCAF must understand the limits of its capabilities and the strategic, operational, and tactical levels. Furthermore, the 2035 document sagely concludes that technological dominance will not be a solution to all challenges.

RCN: Horizon 2050

In *Horizon 2050: A Strategic Maritime Concept for the Canadian Forces*, the RCN agrees with Frank Hoffman's assessment of hybrid threats. These are, "an adversary that has learned to blend asymmetrically all forms of violence, ranging from the purely criminal through the irregular to the conventional, to political purpose, and using superior knowledge of their local terrains—physical, social, and cultural—to fight from a position of relative advantage to avoid western militaries where they are relatively strong and engage them where they are relatively weak."[113] At sea and in the littorals, the RCN lists several recent incidents to illustrate how threats have evolved at sea. The al Qaeda attacks on the USS Cole (2000) and the French oil tanker *Limburg* (2002), Hezbollah's attack on the Israeli corvette *Hanit* during the Second Lebanon War (2006), and the terrorist attacks launched from the sea against Mumbai (2008) are cited as evidence of hybrid threats.[114] Although it is debatable that these examples fit the hybrid description the point is that naval forces must be concerned with more than conventional treats. Due to this, heightened vigilance and awareness are required because "significant and rapid change in threat levels can

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[109] Ibid, p. 32.

[110] Ibid, p.33.

[111] Ibid, p. 32.

[112] Ibid, p. 35. Other examples on this page include: "The recent experiences of other air forces have demonstrated how the inappropriate employment of aerospace power may have an adverse effect on both operational and strategic objectives" and "Following the 2006 Israel-Hezbollah War, the Israeli Air Force was greatly criticized for its misapplication of air power during the campaign."

[113] Royal Canadian Navy, *Horizon 2050: A Strategic Maritime Concept for the Canadian Forces*, (DRAFT), p.24.

[114] Ibid.

never be excluded" in certain regions.[115] Therefore, it is concluded that both at sea and ashore, there is "a wider range of potential threats and challenges than we have ever dealt with before…"[116] Historically, these threats in the maritime environment may not be completely novel, but they will challenge the capabilities of conventional naval power.

Despite the similarities to the concept of asymmetric threats, hybrid threats mixing tactics and strategies within the same maritime space[117] will require an evolution of the naval preparations to face an environment where "operations will unfold within highly complex and politically ambiguous environments."[118] The RCN must be prepared to face a range of threats, which includes swarming attacks by adversaries using fast and manoeuvrable speed boats which would bring ships in the operational range of hand-held weapons.[119] In response to this, the RCN concludes that strategic agility and adaptability must be the defining hallmarks of its posture[120].

In a larger strategic context, "the achievement of strategic objectives in the littorals will demand all elements of national and international power to be woven together within a single coherent operational-level design—the joint campaign—that unifies the actions of all actors in a manner that will increasingly eschew traditional distinctions between peace, conflict and war."[121] The RCN understanding of the littoral operating environment is synonymous with the necessary conditions for facing hybrid war on land, or in the air. This joint campaign concept is a valuable one that illustrates the need to group complimentary capabilities, skills, and abilities in order to successfully operate in such an environment[122].

CANADIAN ARMY: Army of tomorrow

The CA has sought to avoid using the term hybrid warfare, but it does acknowledge that 'hybrid threats' "may well feature the cooperation, on at least some levels, of a number of non-traditional adversaries with more conventional-like enemies, and drives a merging of public safety, human security and national security concerns."[123] Therefore, in this context, military skills may not be sufficient for problem solving and mission success. The characteristics of future warfare described by the CA are similar to those described by the RCAF and RCN. All service elements notice the blending and blurring that defines this categorization of conflict. "A sure conclusion, drawn from an examination of the future security environment, is that a future of rapid change, high uncertainty and considerable volatility is highly probable"[124].

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[115] Ibid, p. 24.
[116] Ibid, p. 25.
[117] Ibid, p. 28.
[118] Ibid, p. 25.
[119] Ibid, p. 28.
[120] Ibid, p. 38.
[121] Ibid, p. 25.
[122] The Joint campaign concept proposed by the RCN is worthy of further study. Its understanding of the problem is clear, but the details for implementation are lacking. In addition, the RCN could explain how the concept differs from the Comprehensive Approach.
[123] Canadian Army, *Designing Canada's Army of Tomorrow*, 2011, p. 21.
[124] Canadian Army, *Designing Canada's Army of Tomorrow*, 2011, p. 86.

"Many of the broad contours of future conflict will resemble those of today. A key difference will be that adversaries are likely to be even more adaptive and the threats they pose even more varied, multi-dimensional and dangerous. […] Combined with human ingenuity, this increased capability to organize and mount significant challenges on a range of fronts with greater access to a range of enablers – in particular, communications, weapon-related technologies and mobility – reach and lethality will dramatically increase. Indications point to a security environment that will be increasingly complex, uncertain, volatile and deadly"[125].

Organizationally, "it is anticipated that in some situations adversaries will organize and function in semi-independent, relatively dispersed cells and groups mixed within the population."[126] In terms of capabilities, it is stated that "future adversaries will inevitably employ an adaptive and tailored mix of capabilities, strategies and tactics to obtain their objectives."[127] Despite the planning processes and attempts at anticipating possible conditions in the future operating environment, operations may "not [be] easily categorized and they will emerge with clarity only as they unfold."[128] Flexibility and resilience will therefore remain essential. These will have to be sought through lessons learned, exercises, scenarios, capability based planning and truly joint perspectives on this challenging future. Furthermore, there will be a requirement to seek joint enablers and employ the Comprehensive Approach.

The characteristics described by the CA prove that its perspectives on future warfare address all the factors used to describe hybrid warfare. Therefore, the terminology, descriptors, matter less than the characteristics and the frameworks developed to face them. The discussion on future warfare should be considered and its plausibility weighed, but the evaluation of concepts can assist in guiding long-range planning. What matters is the ability to see the challenges and develop strategies to counter them. There is a necessity to understand a framework in each given context.

CFD hybrid warfare concept

In June 2012 staff in the Directorate of Capability Integration (DCI) in CFD produced a paper entitled "Hybrid Warfare Concept." This paper was meant "to define and provide fidelity for a hybrid warfare type conceptual environment in the messy middle of the spectrum of armed conflict in order to facilitate Capability Based Planning (CBP) Spiral 2 analysis."[129] The CFD Hybrid Warfare concept expends very little space discussing the characteristics of hybrid warfare, focusing more on a description of a hypothetical operating environment. Nevertheless, it does note most of the basic points that are covered in the literature on hybrid warfare. The concept describes an operational environment that includes both state and non-state opposing forces, including anti-government insurgent groups. The government is described as continuing to control the key levers of national power, including a military and paramilitary force that possesses a variety of aging equipment, a strategic conventional ballistic missile capability, a WMD capability that has reached Initial Operating Capability, and cyber warfare capabilities.[130] The

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[125] Canadian Army, *Designing Canada's Army of Tomorrow*, 2011, p. 16.
[126] Canadian Army, *Designing Canada's Army of Tomorrow*, 2011, p. 19.
[127] Canadian Army, *Designing Canada's Army of Tomorrow*, 2011, p. 21.
[128] Canadian Army, *Designing Canada's Army of Tomorrow*, 2011, p. 19.
[129] CFD, "Hybrid Warfare Concept," June 2012, p.1, para.1.
[130] Ibid, pp.4-5.

non-state portion of the opposing force, the 'hybrid' component, is described as being flexible, adaptable, dynamic, possessing of sophisticated "near peer" weaponry supplemented by the innovative adaptation of commercial off-the-shelf technology, with a distributed, cellular command and control structure, and with aims and objectives that are not clear to the intervening coalition[131].

The paper describes the conceptual environment where unrest has reached a point where violence threatens the stability of the country (and presumably the broader region).[132] Complicating the picture is a civilian socio-cultural environment that includes multiple ethnic and tribal groups adhering to multiple religious backgrounds, the presence of refugees and internally displaced persons, and various criminal actors[133].

The multinational force that intervenes in the scenario does so presumably because of the notion that instability must be countered to avoid broader regional or global implications. In this case, it is because "nations have opted to act in their national interest in order to secure regional stability for international trade routes."[134] The coalition includes the US, China, UK, France, and Canada. The paper argues that this hypothetical hybrid warfare example typifies the types of messy, "protracted slow-burning conflicts of attrition against non-state opponents;" which, due to the "wicked" nature of the problem create "challenging military missions that can be difficult to characterise" because of the many and varied tasks assigned to military forces, in the political context of a failed or fragile state. The concept paper argues that "given the complex nature of operations in this environment, it is highly likely that different operation types will have to be conducted concurrently within the same national AOR, such as stabilisation, peace enforcement, peace-keeping and humanitarian operations."[135] It is argued that this is "the most likely form of operational context to be dealt with by the CF in the foreseeable future"[136].

The hybrid warfare concept also introduces the term "messy middle" to the DND / CAF literature on the subject. Although the origins of the phrase are not clear, David Johnson of RAND wrote in 2011 that militaries need to "mind the middle" of the spectrum of conflict.[137] Johnson argued that the middle of the spectrum of armed conflict is what distinguishes hybridity from asymmetry. Referring to Hezbollah and Hamas, Johnson argued that such groups, both sponsored by multiple states, can create a qualitative advantage because of training, discipline, organization, command and control, access to standoff weapons such as anti-tank guided missile and man-portable air defence systems, and the ability to exploit 'complex' terrain such as urban areas.[138] In effect, the "messy middle" is envisioned as an operational environment that is the worst, most difficult environment for conventional militaries, one in which the advantages seemingly all lie with the adversary.

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[131] Ibid, pp.2, 6, 7.
[132] Ibid.
[133] Ibid, p.6.
[134] Ibid, p.3.
[135] Ibid, p.8.
[136] Ibid, p.13.
[137] David E. Johnson, "Minding the Middle: Insights from Hezbollah and Hamas for Future Warfare," *Strategic Insights*, Volume 10, Special Issue, October 2011.
[138] David E. Johnson, "Minding the Middle: Insights from Hezbollah and Hamas for Future Warfare," *Strategic Insights*, Volume 10, Special Issue, October 2011, p.131.

Conclusion

While the use of the term hybrid warfare is not consistent in the DND/CAF literature on future warfare, the characteristics described in each document are similar and in some cases identical. In a comparative analysis of CA, RCN and RCAF views of the future operating environment, Peter Gizewski and N. J. Faragalla conclude that all three services have cohesive, compatible, and complementary visions.[139] Institutionally, this relative unanimity can be a positive factor. However, concurrence on something as unknowable as the likely characteristics of the future operating environment could equally be cause for concern, signalling that perhaps the institution has developed a narrower viewpoint than what might be ideal.

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[139] P. J. Gizewski and N. J. Faragalla, *Three Voices, One Vision: Land, Naval and Air Views of Future CAF Operations*, DRAFT, DRDC CORA Scientific Report, 1 November 2013, p. 11.

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The subject of "hybrid threats," "hybrid warfare," and "hybrid adversaries" has generated considerable debate within Western militaries, academia, and the professional military literature over recent years. The debate has mostly centred on fundamental issues such as the validity of the hybrid concept, the historical uniqueness of hybrid actors or methods, and what force structure modifications, if any, should be undertaken by Western militaries to best prepare to address the challenges posed by such potential adversaries. For CAF Joint Force Development, the topic is significant enough to have warranted a distinct scenario in the 2014 Force Development Scenario Set. Using historical analysis, this paper identifies and discusses the strategic, operational, and tactical level characteristics of those organizations that have fielded 'hybrid' capabilities in the past. The paper then draws out implications to be considered by those involved in CAF force development activities.

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Hybrid Warfare; joint; force development; capability based planning; scenarios;